

Noakes Bridge  
Spanning One Hundred and Two River  
Hopkins Vicinity  
Nodaway County  
Missouri

HAER No. MO-55

HAER  
MO,  
74-HOP.V,  
1-

PHOTOGRAPHS

HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Rocky Mountain Regional Office  
Department of the Interior  
P. O. Box 25287  
Denver, Colorado 80225

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HISTORIC AMERICAN ENGINEERING RECORD  
NOAKES BRIDGE

I. INTRODUCTION

Location: Noakes Bridge spans the Hundred and Two River one mile south and one mile west of the town of Hopkins, Missouri.

Quadrangle: HOPKINS QUADRANGLE 7.5 minute series

UTM: Zone 15  
N4883450/E343700

Date of Construction: Main span constructed in 1891

Modification: New piers and approach spans constructed between 1909 and 1919

Ownership: Nodaway County Court, Maryville, Missouri

Present Use: Farm to market access across the One Hundred and Two River. The bridge is to be replaced by a new bridge with greater load and width capacity.

Significance: Significance of Noakes Bridge is in its position of being one of the few extant late 19th century steel high through truss bridges documented as constructed by a Missouri bridge builder - St. Joseph Bridge and Iron Works.

Historians: Craig Sturdevant, M. A. Anthropology; Tom Gage, PhD. American History

## II. HISTORY

The Noakes Bridge was the result of a successful petition filed on February 3, 1891.<sup>1</sup> The need for the bridge was to serve residents south and west of Hopkins, Missouri who were located on the other side of the One Hundred and Two River who had to travel several miles south to cross the river and then travel north again to reach Hopkins and other points north.

The contract for Noakes Bridge was first awarded to the Chicago Bridge and Iron Co. who relinquished the contract to St. Joseph Bridge and Iron Company November 5, 1891.<sup>2</sup> The contract was for \$1,975.00 for the construction of the bridge.<sup>3</sup> Construction chronology does not survive within the county records although inspection records indicate the bridge must have been complete by early 1892.<sup>4</sup>

The bridge was first known as the Sam Woods Bridge after a local landowner who was the first to place his name on the petition requesting the bridge.<sup>5</sup>

In 1909, the One Hundred and Two River was channelized and the bridge was left in place. Within the next ten years the natural widening and filling of the new channel overcame the dimensions of the bridge and the main span was raised from its steel cylinder piers, one of which remains in place, to higher sway braced I beam piers and new longer approaches were added.<sup>6</sup> The bridge was raised following a regional flood of 1913 and was in its present configuration by 1919.<sup>7</sup>

The Noakes Bridge exemplifies an important era in Missouri transportation development. With the advent of iron and then the cheaper steel bridges beginning in the 1860's through the turn of the century, the many streams and rivers could be affordably crossed. This allowed expansive growth of the state's road system and consequently an expanded market system.

### III. THE BRIDGE

The Noakes Bridge is a well constructed pin connected Pratt high through truss. The bridge contains a relatively large number of wrought iron members given the 1891 construction date and the generally accepted reduction of wrought iron following 1880.

The 7 panel main span is 119 feet long and 18' 6" wide out to out supporting a 16' wide roadway. The hip verticals are paired 7/8" square wrought iron eye bars. The diagonals are paired 3/4" by 2 1/4" wrought iron eye bars in the 2nd and 6th panels and 7/8" square wrought iron eye bars in the 3rd and 5th panels. The 4th panel is braced and counter braced with paired 3/4" round eye bars. The top and bottom laterals are 1" square wrought iron eye bars. The struts are abutted 5" angle iron. The portal bracing is an unembellished sway brace of abutted 2 1/2" angle iron.

The bottom chords in the 1st, 2nd, 6th, and 7th panels are paired 3/4" by 2 1/4" eye bars. The bottom chords' 3rd, 4th, and 5th panels are paired 3/4" by 4" eye bars. The floor beams are 15" I beams. There are 7 stringers. The outer two are 7" channels. The remaining 5 are 7" I beams. The deck is oak planking.

### IV. ST. JOSEPH BRIDGE AND IRON WORKS

The St. Joseph Bridge and Iron Works put out over 1800 long tons of bridges during the operating years of 1894, 1895, and 1896 which made the company one of the more prolific Missouri bridge builders at the end of the 19th century.<sup>8</sup> The company is given an operating date of 1894 to 1898 by Darnell.<sup>9</sup> Noakes Bridge was, however, constructed in 1891 which indicates the company was operative earlier than the Darnell date suggests. A St. Joseph city directory notes presence of a St. Joseph Bridge

and Boiler Works with a J. H. Sparks, President in 1891.<sup>10</sup> An 1895 St. Joseph City directory lists a St. Joseph Bridge and Iron Works with J. H. Sparks, President and Treasurer.<sup>11</sup> It is apparent that the company was operating from at least 1891 although the name may not have been settled as St. Joseph Bridge and Iron Works until 1894.

#### V. THE PROJECT

Noakes Bridge will be replaced with a new bridge which will meet projected traffic needs. Noakes Bridge is one of the rapidly vanishing steel through truss bridges which have played an important role in the historic development of Missouri. At present, a state-wide bridge inventory is being carried out by FraserDesign which will allow interpretation of state and local context of bridges such as Noakes Bridge. This inventory should be available by 1990.

#### V. NOTES

- 1 Petition to Nodaway County Court. February 3, 1891. Maryville, Missouri, 1.
- 2 Surveyor and Bridge Commissioner Filing. September 1, 1891. Maryville, Missouri, 1.
- 3 Surveyor and Bridge Commissioner Filing. August 4, 1891. Maryville, Missouri, 2.
- 4 Surveyor and Bridge Commissioner Filing. January 15, 1892, 1.
- 5 Petition to Nodaway County Court. February 3, 1891. Maryville, Missouri, 2.
- 6 Personal Communication: Chicago Bridge and Iron Company past employee. Interview July 20, 1989.
- 7 Personal Communication: Noakes Bridge area landowner. Interview July 20, 1989.

- 8 Darnell, Victor C., Directory of American Bridge Building Companies 1840 - 1900, 78.
- 9 Ibid., 30.
- 10 Hoye's City Directory of St. Joseph for 1891, 543.
- 11 Hoye's City Directory of St. Joseph for 1895, 483.

## VI. BIBLIOGRAPHY

### Directories

Hoye's City Directory of St. Joseph for 1891.  
St. Joseph: Hoye City Directory Company, 1891,

Hoye's City Directory of St. Joseph for 1895.  
St. Joseph: The Shirley Press, 1895.

### Books

Darnell, Victor C. Directory of American Bridge Building Companies 1840 - 1900. Washington D.C.: Society for Industrial Archeology Occasional Publication No. 4, 1984.

### Other

Petition to Nodaway County Court. February 3, 1891. Maryville, Missouri.

Surveyor and Bridge Commissioner Filing. August 3, 1891. Maryville, Missouri.

Surveyor and Bridge Commissioner Filing. September 1, 1891. Maryville, Missouri.

Surveyor and Bridge Commissioner Filing. January 15, 1892. Maryville, Missouri.

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